

water biologist

Name: _____



Requirements	Passed
1. Show that you have a knowledge of the water cycle and the major types of rivers and wetlands in southern Africa.	
2. Describe in detail the physical and chemical properties of our fresh waters. Explain how these affect the life that occurs in freshwater rivers and wetlands.	
3. From slides, photographs, or diagrams selected by the examiner, identify at least 10 out of 20 of the following: a) larvae of tadpole (frog), dragonfly, mayfly, stonefly, caddisfly, dobsonfly, waterpenny, mosquito, black fly, rat-tail maggot. b) adults of dragonfly, damselfly, mayfly, stonefly, strider, boatman, waterbug, waterscorpion, whirligig beetle, diving beetle, springtail, copepod, ostracod, water flea, sewage worm, leech.	
4. Conduct a MiniSASS survey and write a report on the status of a river near you. Provide evidence that you have contributed online to the MiniSASS survey of Southern Africa.	
5. Keep rainfall records and monitor changes in flow in a stream, river, or canal near you for any two seasons that includes a rainy season. OR Upload to a citizen science site (such as www.inaturalist.org) at least 20 observations of different wild species observed by you in a river or wetland in your area. OR Identify as alien or indigenous 10 out of 20 animal (vertebrate and invertebrate, at least half of which will be alien) species from slides, photographs, or diagrams selected by the examiner, and if alien explain the effects it has on freshwater ecosystems.	
6. How do human activities affect – both physically and chemically - fresh water, and what can we do to ameliorate these activities? Put one of these into action in your local river, wetlands, or suburb, and summarize what you achieved.	
7. Explain the significance of groundwater, and its importance for wetlands and human activities. Discuss the negative effects of human use of the water table and what needs to be done to prevent these.	

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Badge Awarded

